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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/065,496

10/24/2002

Patrick Joseph Philips

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04/01/2004

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EXAMINER

CORRIGAN, JAIME W

ART UNIT

PAPER NUMBER

3748

DATE MAILED: 04/01/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/065,496

Applicant(s)

PHLIPS, PATRICK JOSEPH

Examiner

Jaime W Corrigan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the Request for Reconsideration filed on 20 January 2004. Overall, claims 1-16 are pending in this application. The arguments with respect to the references applied in the first Office Action were deemed persuasive, however, a new Non-final rejection is set forth below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 11-14, 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Benlloch Martinez PN (6,135,076).

Regarding claims 1, 13 Benlloch Martinez discloses a method for controlling valve timing (See Column 3 Lines 63-67, Column 4 Lines 1-15) in a diesel engine, the engine having at least one cylinder and at least one inlet valve (See Figure 4 (1)) and at least one exhaust (See Figure 4 (1)) valve per cylinder, the engine also having a first camshaft (See Figure 1 (3), (5), (9)) for controlling the opening (See Abstract, Column 6 Lines 33-37) of the inlet valve and a second camshaft (See Figure 1 (2), (4), (6)) for controlling the closing (See Abstract, Column 6 Lines 22-31) of the inlet valve, the method comprising: adjusting closing time of the inlet valve based on an engine speed (See Column 2 Lines 38-67, Column 3 Lines 1-28, Column 3 Lines 63-67, Column 4

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Lines 1-15) wherein said adjustment is effected by a camshaft phaser (See Figure 2 (13), (14), (18), Column 6 Lines 45-67, Column 7 Lines 1-10) coupled to the second (See Figure 2 (2-3), Column 6 Lines 45-47) camshaft.

Regarding claims 2, 16 Benlloch Martinez discloses said camshaft phasing mechanism is capable of delaying the closing time of said inlet valve up to 60 crank angle degrees (See Column 7 Lines 21-23).

Regarding claim 3 Benlloch Martinez discloses said first and second camshafts are parallel to and adjacent to each other (See Figure 1 (2), (3)).

Regarding claim 4 Benlloch Martinez discloses a first drive (See Figure 2 (2-3), (13)) coupled to said first camshaft; and a second drive (See Figure 2 (2-3), (13)) coupled to said second camshaft wherein said first and second drives are arranged at opposite ends of said parallel camshafts.

Regarding claim 5 Benlloch Martinez discloses an engine timing unit coupled to said camshaft phasing mechanism (See Column 3 Lines 63-66).

Regarding claim 6 Benlloch Martinez discloses closing time of said inlet valve is controlled by said engine timing unit controlling said camshaft phasing mechanism (See Column 3 Lines 63-66).

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Regarding claim 7 Benlloch Martinez discloses said closing time of said inlet valve is adjusted based on an engine speed (See Column 2 Lines 38-67, Column 3 Lines 1-28, Column 3 Lines 63-67, Column 4 Lines 1-15).

Regarding claims 8, 14 Benlloch Martinez discloses said closing time of said inlet valve is adjusted based on an engine torque (See Column 3 Lines 29-32).

Regarding claim 11 Benlloch Martinez discloses the first camshaft controls opening and closing times of the exhaust valve (See Figure 4 (1)).

Regarding claim 12 Benlloch Martinez discloses a third (See Figure 2 (2-3)) camshaft for the exhaust valve (See Figure 4 (1)), said third camshaft controlling an opening and closing time of the exhaust valve.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-10, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benlloch Martinez PN (6,135,076) in view of Schechter (PN 5,255,637).

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Benlloch Martinez discloses the invention as recited in claims 1, 13 above, however, fails to disclose adjusting the closing time of the inlet valve based on a charging pressure of turbocharger.

Schechter teaches that it is conventional in the art to utilize the engine has a turbocharger (See Figure 1 (18)) coupled thereto, the method further comprising: adjusting closing time of the inlet valve based on a charging pressure (See Figure 2, Column 2 Lines 27-37, Column 3 Lines 23-42) of said turbocharger.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the closing time of the inlet valve based on a charging pressure of said turbocharger taught by Schechter in the Benlloch Martinez device since it would improve fuel efficiency.

Conclusion

Any inquiry concerning this communication from the examiner should be directed to Examiner Jaime Corrigan whose telephone number is (703) 308-2639. The examiner can normally be reached on Monday - Friday from 8:30 a.m. – 6:00 p.m. 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

JC

Jaime Corrigan

Jaime Corrigan

Patent Examiner

March 30, 2004

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Thomas Denion
THOMAS DENION
SUPERVISORY PATENT EXAMINER
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